

A NEW SPECIES OF *PARTHENOPE* (CRUSTACEA: DECAPODA: PARTHENOPIDAE)  
FROM DEEP-WATER OFF NORTHERN QUEENSLAND

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A new species, *Parthenope* (*Platylambrus*) *cidaris*, has been collected using an epibenthic sledge from 685m in the waters off northeastern Queensland. It belongs to the *P. (P.) stellata* species group, and is separated from the known species by differences in carapace granulation and spination, carapace regional differentiation, and some claw characters. Photographs of the holotypes of *P. stellata*, *P. complanata*, and *P. lacunosa*, all described by Rathbun (1906) are presented for comparison. □ *Crustacea, Decapoda, Brachyura, Parthenopidae, Parthenope, Platylambrus, new species, deepwater, Queensland.*

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In September 1988 the R.V. *Franklin*, under the direction of Professor Michel Pichon, carried out an exploratory cruise in the east Australian bathyal zone. This cruise, known as 'CIDARIS II' was one of a series of three conducted as part of the research project 'The deep-water benthos off the Great Barrier Reef Shelf and adjacent Coral Sea'. The CIDARIS cruises employed beam trawls, Charcot dredges and epibenthic sledges on the continental slope of the Great Barrier Reef, and also in the Queensland basin.

Along the east Australian coast, deep-water crabs have been most recently studied by Griffin & Brown (1976), Griffin & Tranter (1986a, b), Davie and Short (1989). A large paper recording many new species and records from northeastern Australia and the Coral Sea is currently in preparation (Davie & Richer de Forges, in prep.).

The present *Parthenope* species belongs to a group in the subgenus *Platylambrus* found in deep-water in the eastern central Pacific, discussed and described by Garth (1993), viz. *P. stellata* Rathbun, 1906, *P. complanata* Rathbun, 1906, *P. lacunosa* Rathbun, 1906, *P. mironovi* (Zarenkov, 1990), *P. poupini* Garth, 1993, and *P. allisoni* Garth, 1993. Of these it is most closely allied to *P. stellata* and *P. poupini*, but it differs from them sufficiently to warrant specific separation.

Abbreviations: mm, millimetres; QMW, Queensland Museum, Brisbane; USNM, Smithsonian Institution, United States National Museum, Washington.

SYSTEMATICS

*Parthenope* (*Platylambrus*) *cidaris* sp. nov.  
(Figs 1, 2A)

MATERIAL EXAMINED

HOLOTYPE: QMW16086, ♀, CIDARIS II, Stn 23.4, 14°52'S, 145°46'E, 9.9.1988, 685m, epibenthic sledge.

DESCRIPTION

Measurements (in mm): length 36.8, width 52.8, length of major (right) cheliped 84.0, of chela 43.8, of dactyl 18.8, height of palm 19.3.

Carapace triangular, broader than long, length 1.43 times width, deeply channelled, microscopically eroded and pitted, a few larger tubercles at ends of ridges. Front slender, tip rounded, sides gently sloping toward slightly advanced inner orbital margin; thickened ridge extending backward onto protogastric region. Major elevations disposed as follows: proto- and mesogastric separated widely from cardiac-intestinal, these separated widely from metabranchial and branchial. Branchial ridge diagonally directed, divided by row of pits into larger posterior and smaller anterior ridge. Anterolateral margins arcuate, dentate, teeth denticulate, those on hepatic and anterior branchial portions larger. Last anterolateral tooth spatulate; backward-pointing tubercle at end of branchial and metabranchial ridges.

Merus of third maxilliped flaring anterolaterally, margin crescent-shaped, crossed by median ridge.

Chelipeds grossly disproportionate, right largest; left, although perfectly formed, feeble and perhaps regenerated. Merus trigonal, spinous-

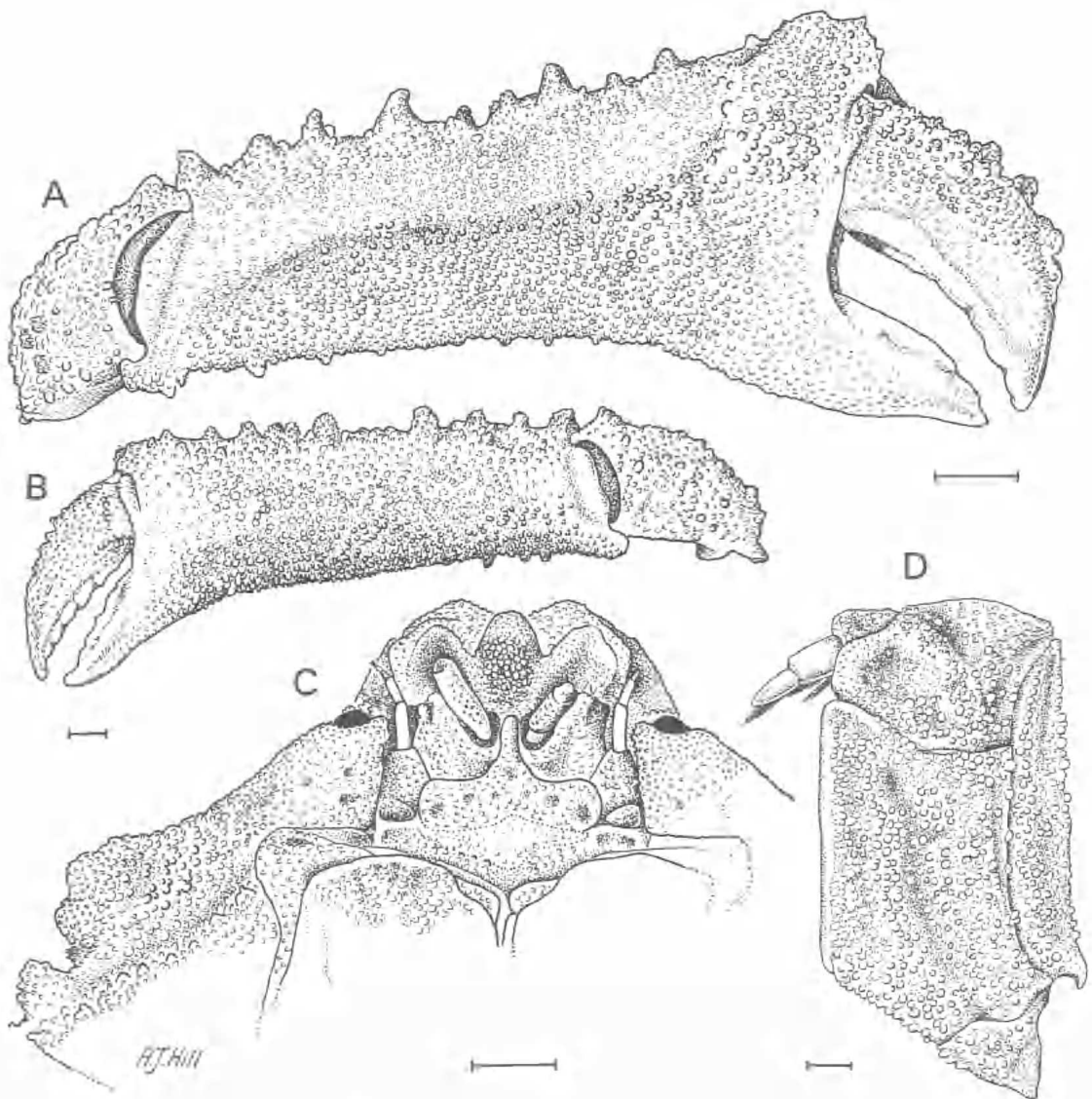


FIG. 1. A-D, *Parthenope cidaris* sp. nov., holotype ♀. A, right chela. B, left chela. C, frontal view. D, third maxilliped.

margined, carpus likewise, propodus gradually increasing in width distally, large spines on crest, row of spines turning upward on inner margin. Fingers incurving, gaping, brown colouring extending to tips.

Walking legs slender, decreasing regularly in length from first to last; meri spinous above and below; carpi with two triangular flanges; propodi spinous basally; dactyli smooth, curved, felted.

Female abdomen six-segmented, tuberculate.

#### REMARKS

As compared to the holotype of *P. (P.) stellata* Rathbun 1906, the *P. cidaris* female lacks the overall paving with stellate granules that suggested to Rathbun the name 'stellata'. The vast proportion of the granules are single, only a few tending to merge, let alone form stars. The single tubercles that in *P. stellata* top the gastric, cardiac, and branchial regions are lacking in *P. cidaris*, although some larger tubercles occur posteriorly. The branchial ridge is more promi-

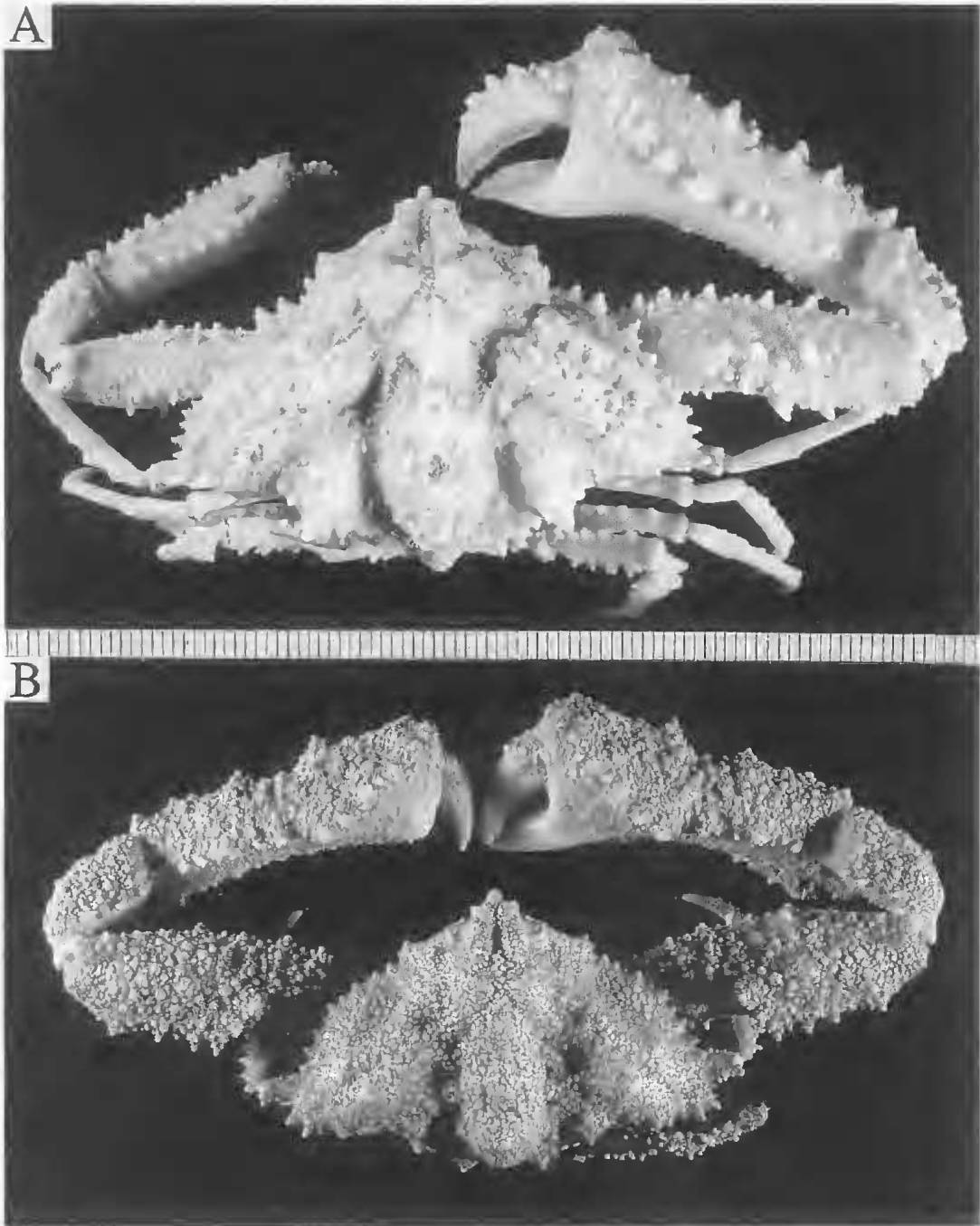


FIG. 2. A, *Parthenope cidaris* sp. nov., holotype ♀. B, *P. stellata* Rathbun, 1906, holotype, USNM.

nent and swollen, and the furrows separating it from the metabranchial and cardiac regions are deeper. The last spine of the lateral ridge is spatulate, as is the spine internal to it, on the left side,

at least. The chelipeds, especially their propodi, are more prominently trigonal in cross-section, the intervening flat surfaces almost smooth. The outer surfaces of the hands, both major and minor,

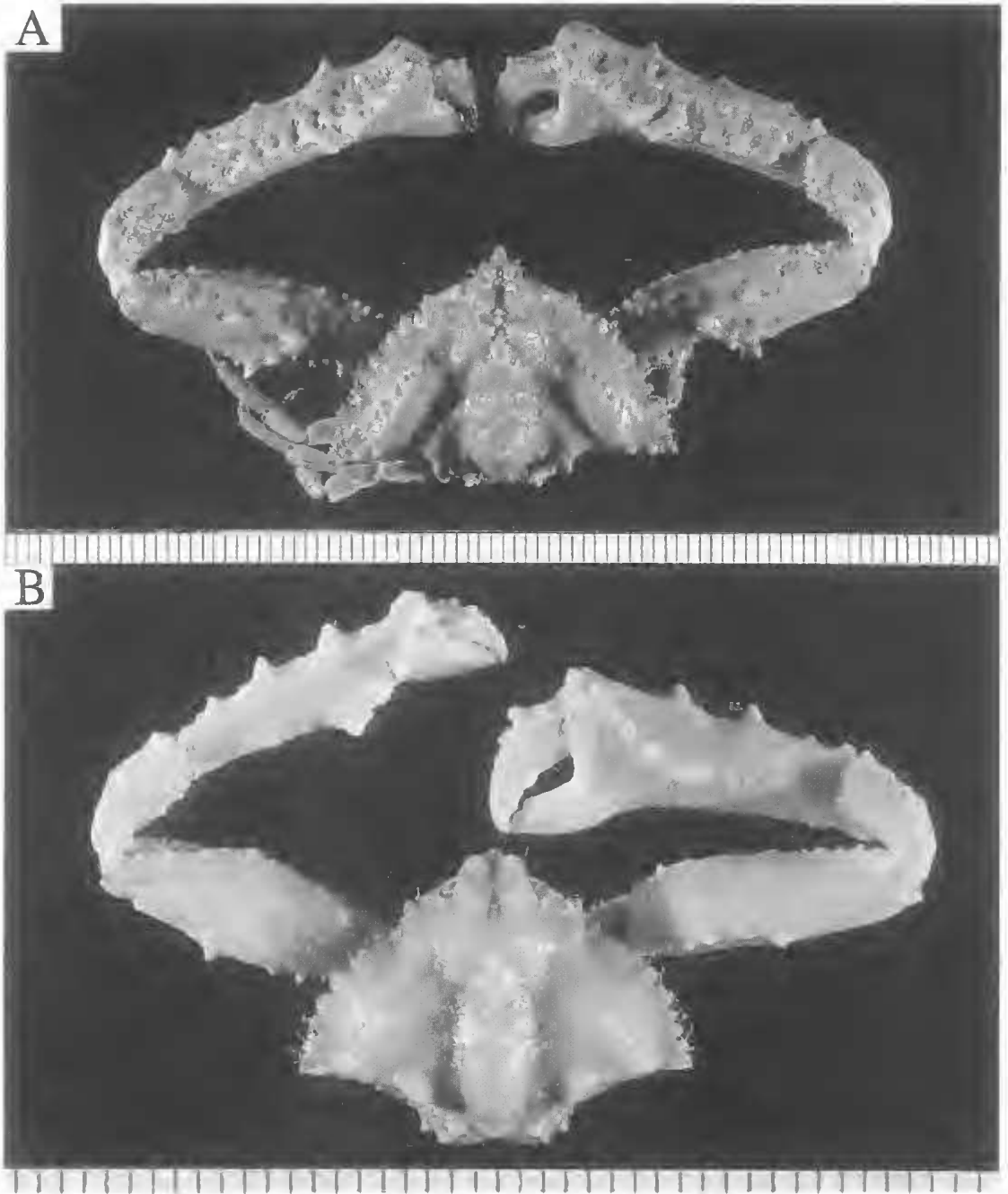


FIG. 3. A, *P. lacunosa* Rathbun, 1906, holotype, USNM. B, *P. complanata* Rathbun, 1906, holotype, USNM.

are smoother, except for a median tuberculate ridge on the major manus.

As compared to the holotype of *Parthenope* (*P.*) *poupini* Garth, 1993, from French Polynesia, the *P. cidaris* female is much broader, the elevations of the carapace more prominent, the spines

of the anterolateral margins longer and sharper. The ridges, which in *P. poupini* tend to fuse, retain their distinct tuberculation in *P. cidaris*.

Garth (1993) previously recognised that *P. stellata* Rathbun, 1906 (Fig. 2B), as well as its named varieties, *P. stellata complanata* Rathbun,

1906 (Fig. 3B), and *P. stellata lacunosa* Rathbun, 1906 (Fig. 3A), all must have full species rank. As part of this study we re-examined the holotypes of all three taxa, and while *P. cidaris* is most clearly allied with *P. stellata*, it is useful to publish new photographs of the holotypes of all species. We believe that *Parthenope* (*P.*) *cidaris*, while undoubtedly belonging to the same species-group as *P. stellata* is also sufficiently distinct to deserve specific rank.

#### ACKNOWLEDGEMENTS

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